DON Data Management & Interoperability

Navy RIC Meeting

12 April 2001

Office of the DON CIO

Briefing Outline

- Briefing Objectives
- DON CIO's Role in Architecture & Standards
- Board of Representatives Integrated Product Teams
- Emphasis on Interoperability
- The Data Management & Interoperability Challenge
- Enterprise Strategy
- DON DMI IPT Products
- Related Efforts
- Summary

Objectives

- Provide an overview of DON CIO's role in Architecture & Standards.
- Discuss the DON CIO-sponsored Data Management & Interoperability efforts.
- Solicit recommendations/comments from the Navy Logistics Community.

DON CIO Role in Architecture & Standards

- Clinger-Cohen Act of 1996 (Public Law 104-106)
  - Establish and maintain a capital planning and investment control process that links mission needs, information, and information technology.
  - Develop, maintain, and facilitate the implementation of a sound and integrated information technology architecture.
- Information Technology Architecture defined in OMB Circular A-130:
  - Business Processes
  - Information Flows
  - Data Descriptions
  - Applications
  - Technology Infrastructure
  - Standards and Technical Reference Model

Board of Representatives IPTs

- Information Technology Standards Guidance
  - May 1998
- Information Technology Infrastructure Architecture
  - May 1999
- Data Management & Interoperability
  - November 2000

Increased Emphasis on Interoperability

NMCI-Enabled DMI-Enabled

Information Exchange	Level	Computing Environment
Distributed global info. and apps. Simultaneous interactions w/ complex data Advanced collaboration e.g., Interactive COP update, event-triggered global database update	**4 -- Enterprise** Interactive manipulation Shared data & applications	
Shared databases Sophisticated collaboration e.g., Common Operational Picture	**3 -- Domain** Shared data Separate applications	
Heterogeneous product exchange Group Collaboration e.g., Exchange of annotated imagery, maps with overlays	**2 -- Functional** Minimal common functions Separate data & applications	
Homogeneous product exchange e.g., FM voice, tactical data links, text file transfers, messages, e-mails	**1 -- Connected** Electronic connection Separate data & applications	
Manual Gateway e.g., diskette, tape, hard copy exchange	**0 -- Isolated** Non-connected	

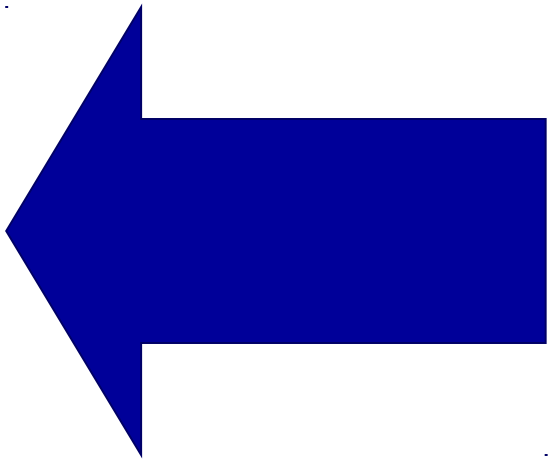
-Levels of Information Systems Interoperability

The DMI Challenge

- Data is redundant, not shared, and often conflicting.
- Current acquisition process does not adequately address data.
  - Stove-piped development characterized by non-standard data and unique interfaces/translators.
  - Inadequate and inconsistent documentation to support interoperability and IT assessments.
- Lack of enterprise management and engineering processes to solve cross-system, cross-Service data problems.

Enterprise Strategy

- Strategic Planning Meeting, 24-25 August 1999.
  - 60 attendees/28 organizations
- Board of Representatives IPT, November 1999.
  - 40 participants/27 Commands
- IPT Products:
  - Strategic Plan
  - SECNAVINST
  - Implementation Planning Guide
  - Metadata Repository Requirements
- Metadata Repository Pilot



Strategic Plan Goals

1. *Provide a data management infrastructure that will ensure maritime Information Superiority.*
   - Data management policy
   - Acquisition policy
   - Education and training
   - Outreach strategy
2. *Reduce the life cycle cost of data through integration, standards, and the use of authoritative data sources.*
   - Focus efforts
   - Develop and implement standards
   - Identify authoritative data sources

Strategic Plan Goals

3. *Provide a DMI repository and tools to support IT assessments and engineering.*
   - Define repository requirements
   - Conduct pilot
   - Provide metadata capture and analysis tools
4. *Provide a data architecture which addresses both information requirements and data capabilities.*
   - Establish baseline of data assets
   - Define information requirements via Operational Architecture
   - Develop data architecture

Strategic Plan Goals

5. *Provide processes and metrics to enable and evaluate data management and data engineering.*
   - Standard processes and procedures
   - Metrics for cost and operational assessments
   - Assess emerging technologies
   - Process improvement

SECNAV Instruction

- Policy implements the Strategic Plan.
- Requires funding of data management in the PPBS process.
- Requires appointment of Navy and Marine Corps Data Managers:
  - Service
  - Functional

Functional Data Managers

- Responsibilities:
  - Implement processes associated with the production and use of data.
  - Assist Program Managers in the documentation of data exchange formats and systems/application metadata.
  - Develop and maintain functional area views of the DON data architecture.
  - Coordinate with the DoD and other Service/Agency data managers.
  - Monitor data standards implementation.
  - Designate authoritative data sources.

Implementation Planning Guide

- Guidelines for implementation of SECNAVINST.
  - Approved by Board of Representatives in November
  - Promulgation following SECNAVINST signature

- Addresses:
  - DMI Requirements
  - Related efforts
  - DMI Concept of Operations
  - Plan of Action and Milestones

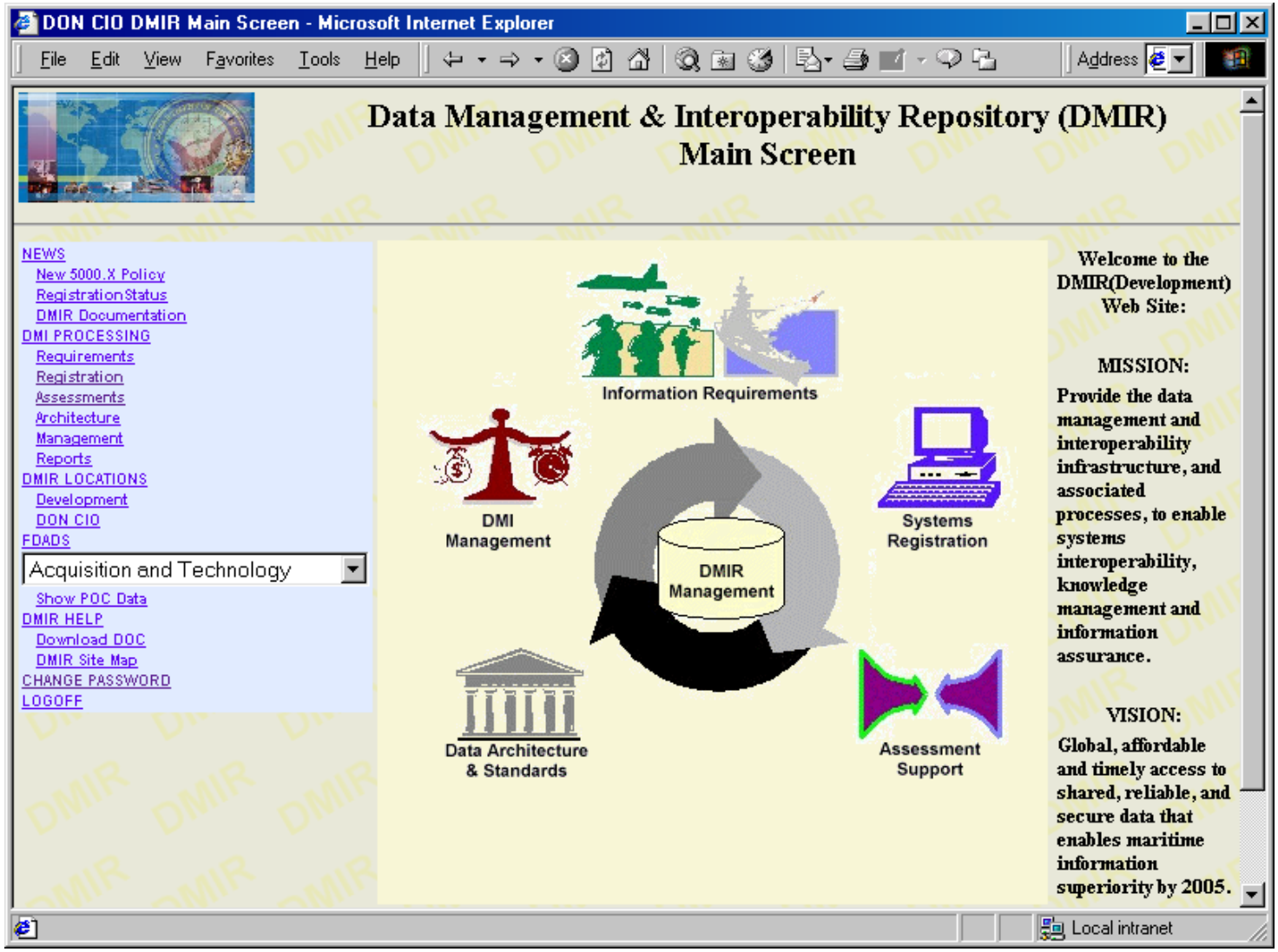
Metadata Repository Requirements

- Systems-focused.
- Capability to identify families-of-systems.
- Comply with Section 8121/8102 requirements.
- Support data interoperability assessments.
- Comply with DoD 8320.1-M-1 metadata requirements.
- Do not duplicate Defense Data Dictionary System capabilities.
- Core Architecture Data Model (CADM)-based database structure.

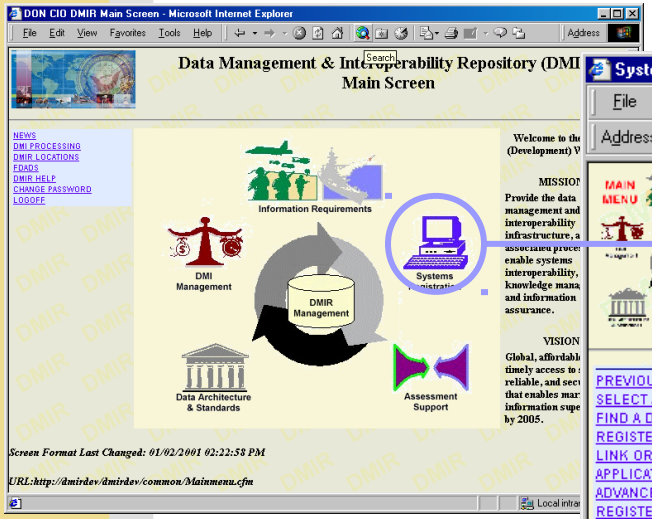
Repository Pilot

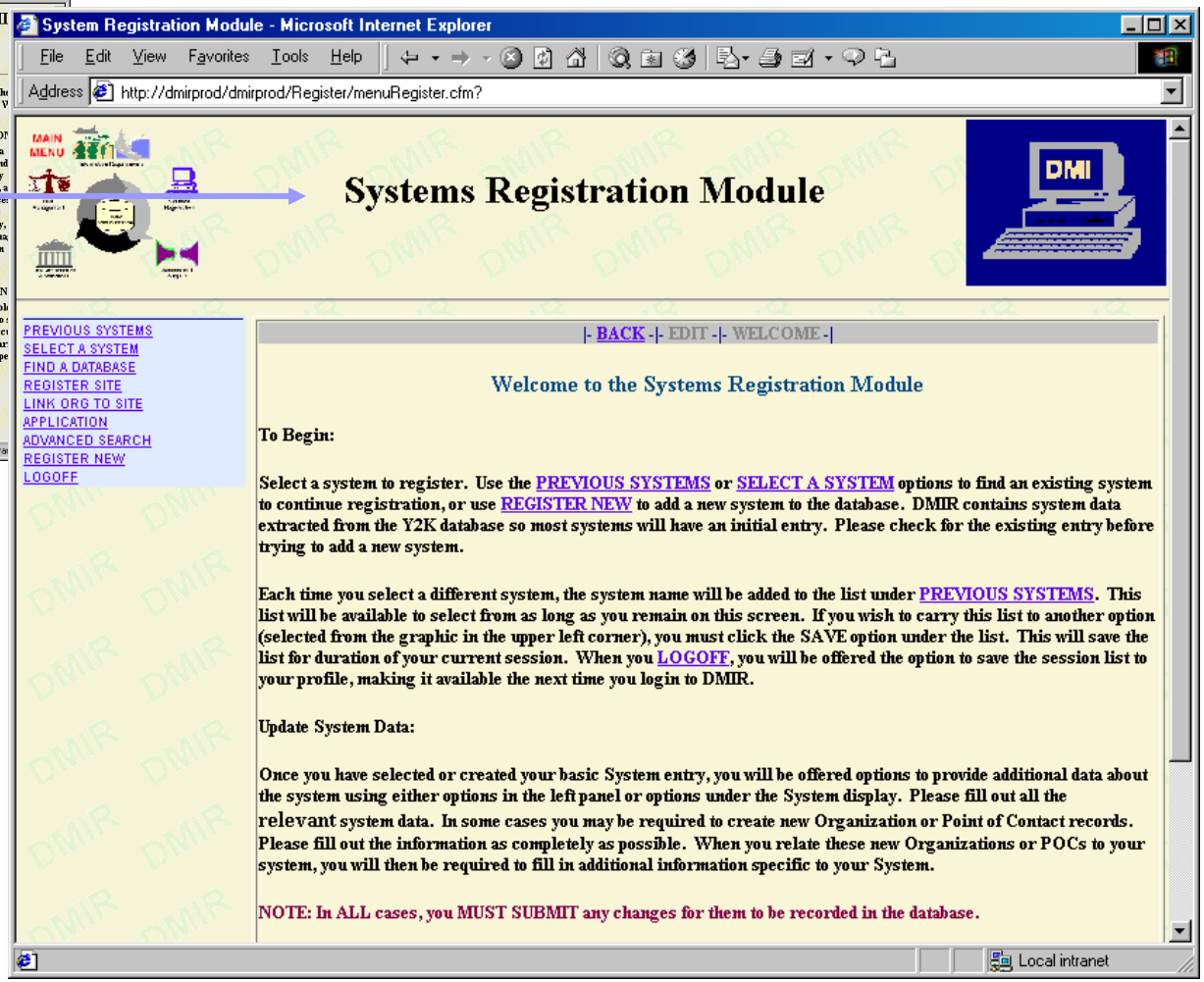
- Operational DMI Repository (DMIR).
  - Oracle 8i database
  - Cold Fusion GUI
  - Hosted at contractor facility
- Test data:
  - Collected by MARCORSYSCOM and Fleet Information Warfare Center
  - DON Y2K Database used as systems baseline
  - Testing to be completed July - September
- Considering options for permanent hosting.
  - October 2001

DMIR Main Screen



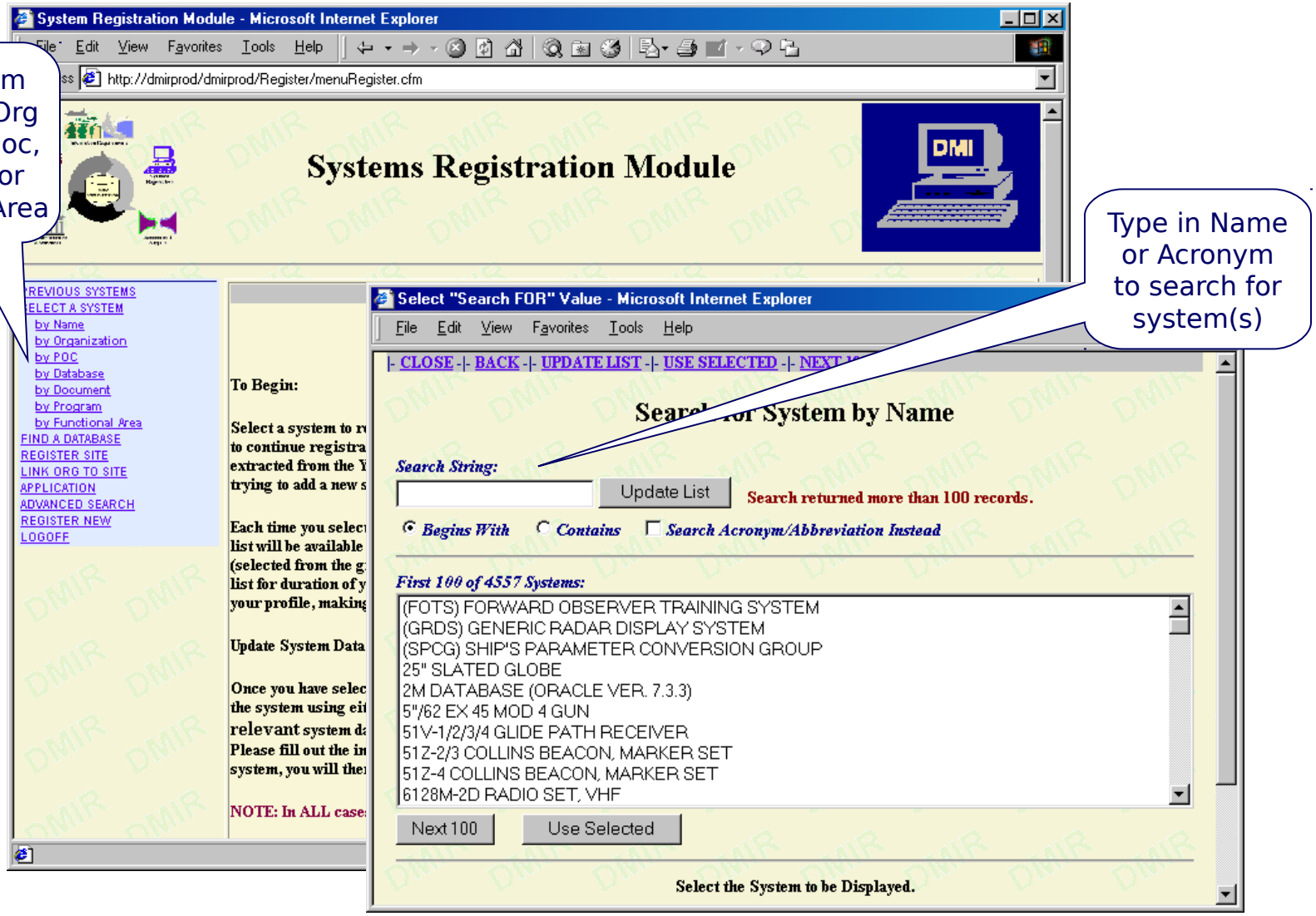
DMIR System Registration





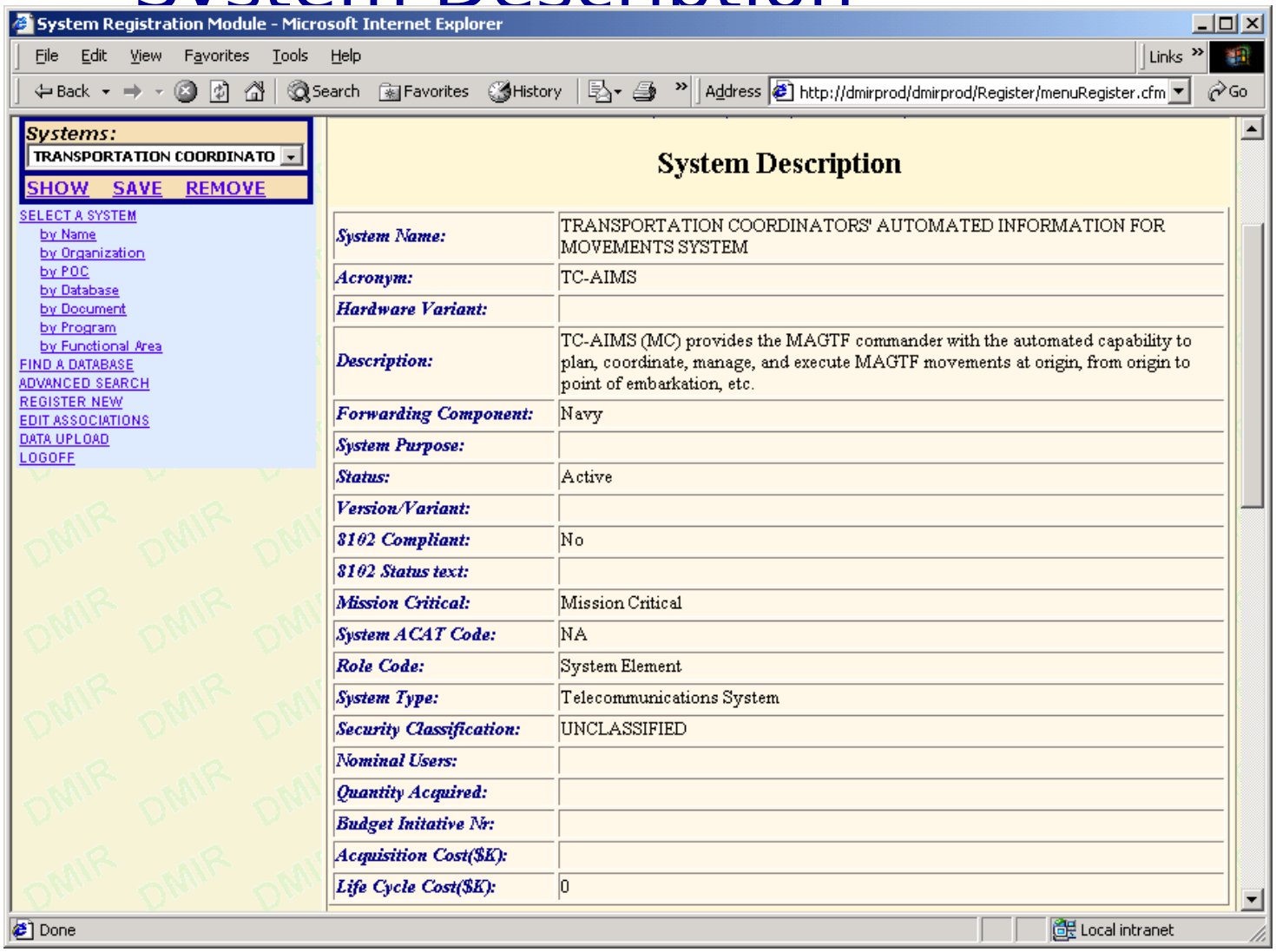
DMIR System Registration - Select System

Find system by Name, Org POC, DB, Doc, Program, or Functional Area

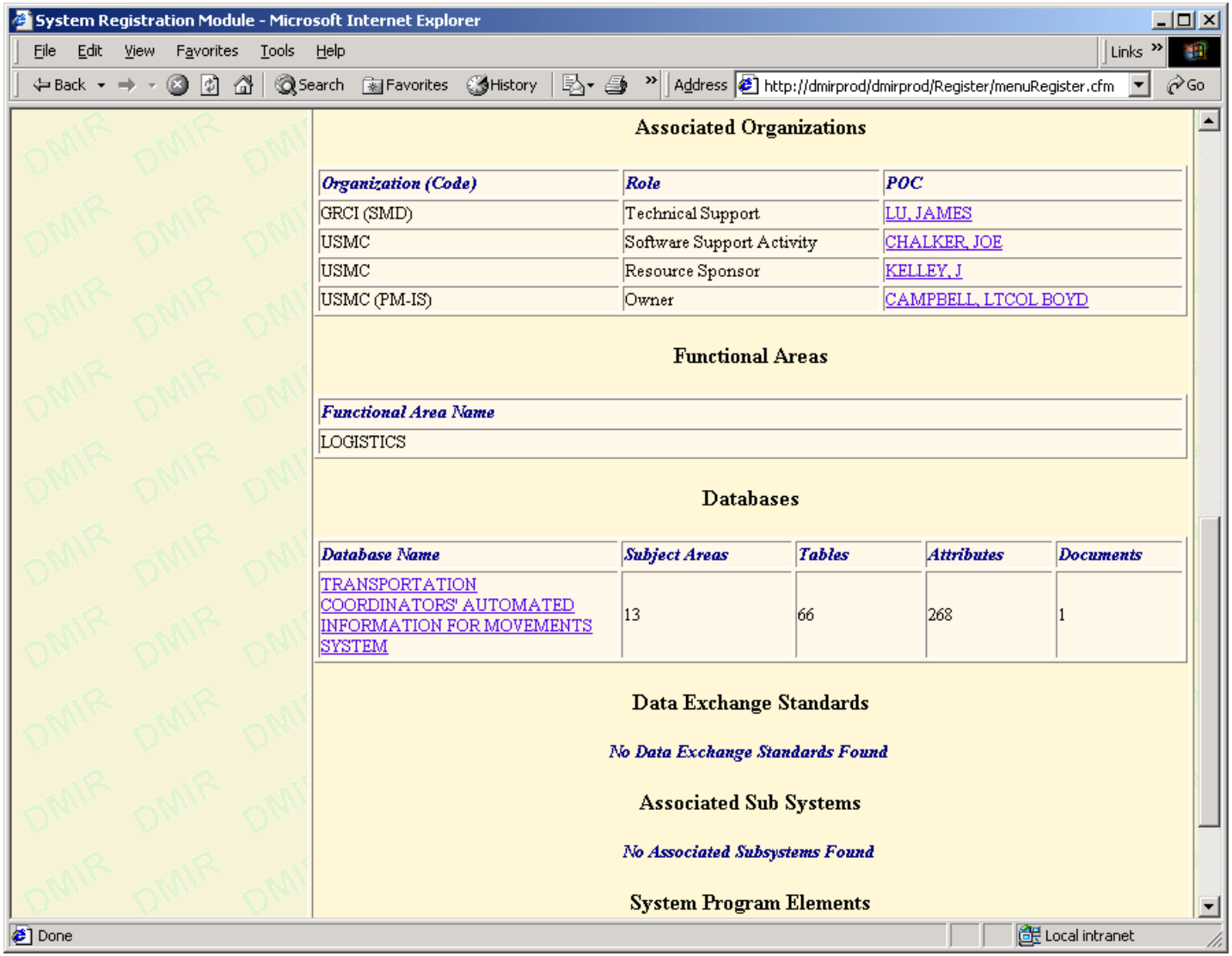


Type in Name or Acronym to search for system(s)

DMIR System Registration - System Description



DMIR System Registration - System Description (cont.)



Associated Organizations

Organization (Code)	*Role*	*POC*
GRCI (SMD)	Technical Support	LU, JAMES
USMC	Software Support Activity	CHALKER, JOE
USMC	Resource Sponsor	KELLEY, J
USMC (PM-IS)	Owner	CAMPBELL, LTCOL BOYD

Functional Areas

Functional Area Name
LOGISTICS

Databases

Database Name	*Subject Areas*	*Tables*	*Attributes*	*Documents*
TRANSPORTATION COORDINATORS' AUTOMATED INFORMATION FOR MOVEMENTS SYSTEM	13	66	268	1

Data Exchange Standards

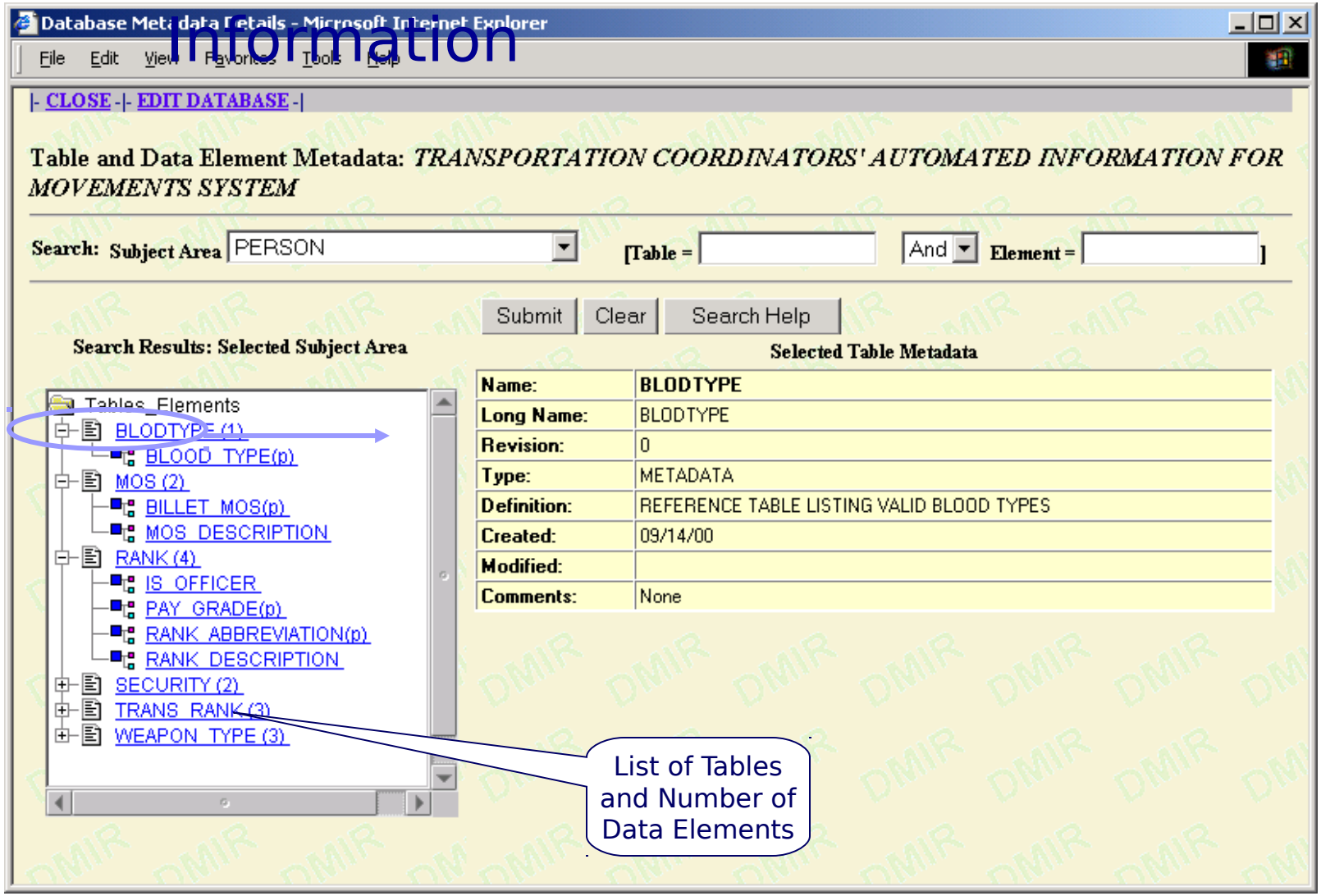
No Data Exchange Standards Found

Associated Sub Systems

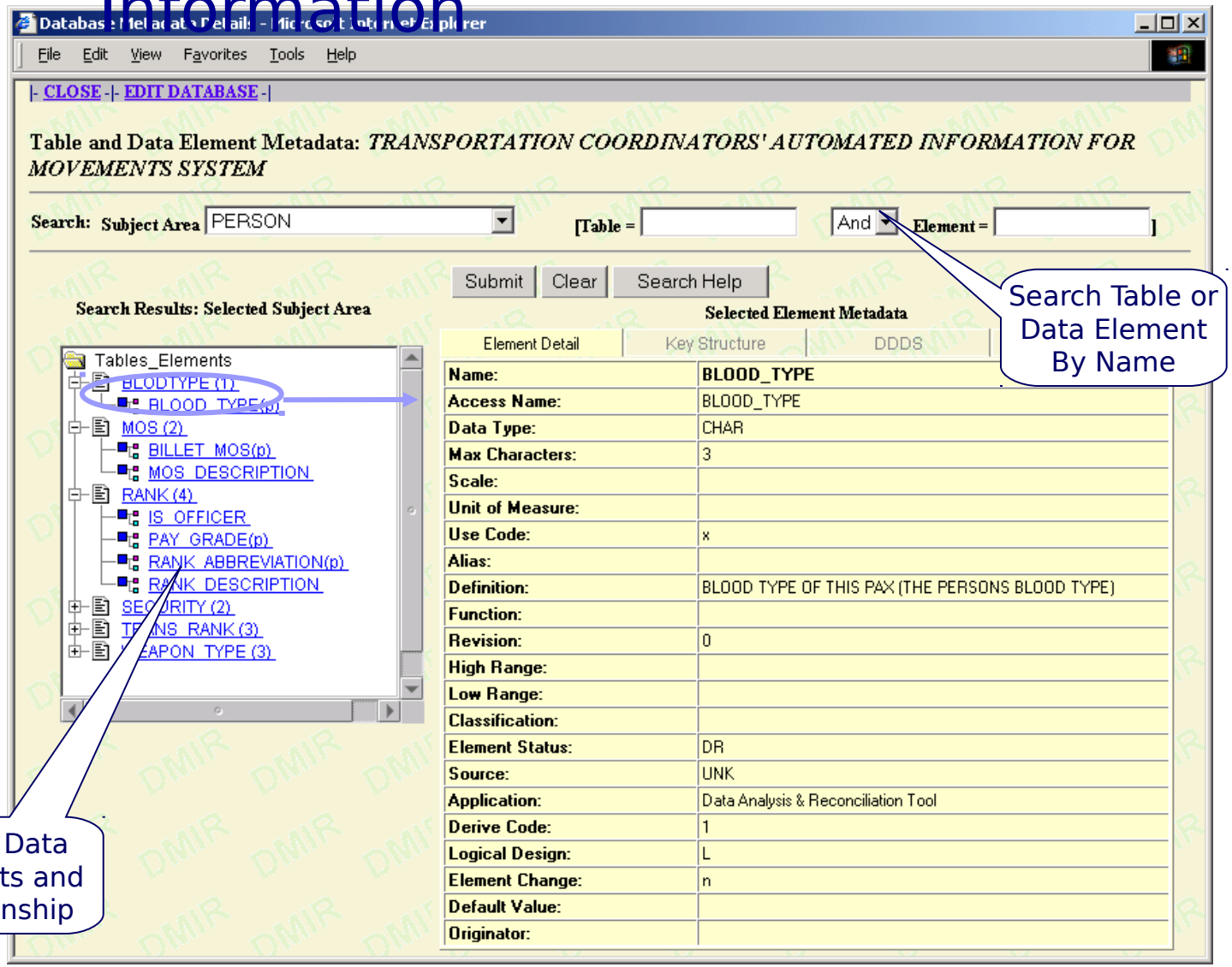
No Associated Subsystems Found

System Program Elements

DMIR System Registration - Edit Database Metadata Table Information



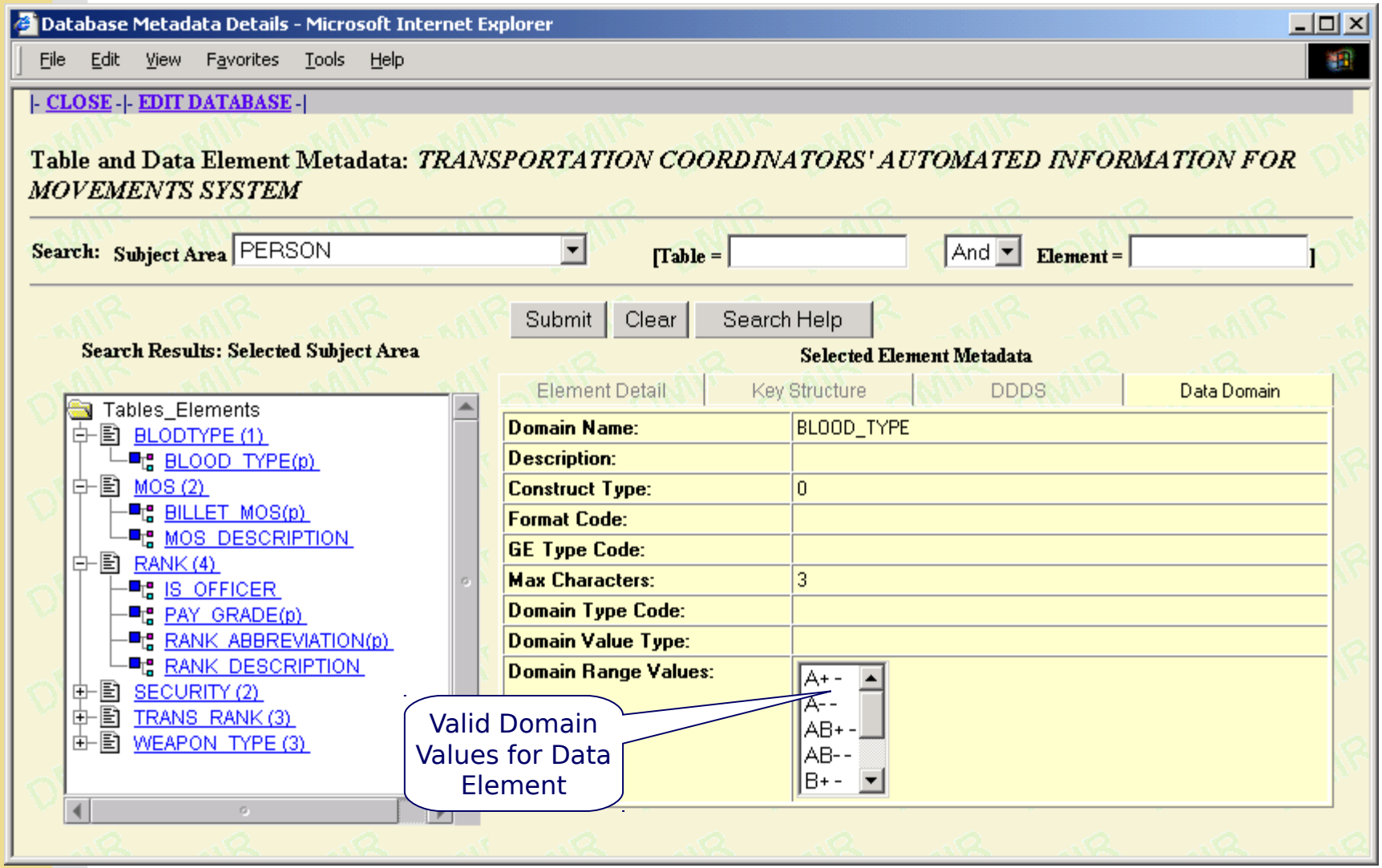
DMIR System Registration - Edit Database Metadata Data Element Information



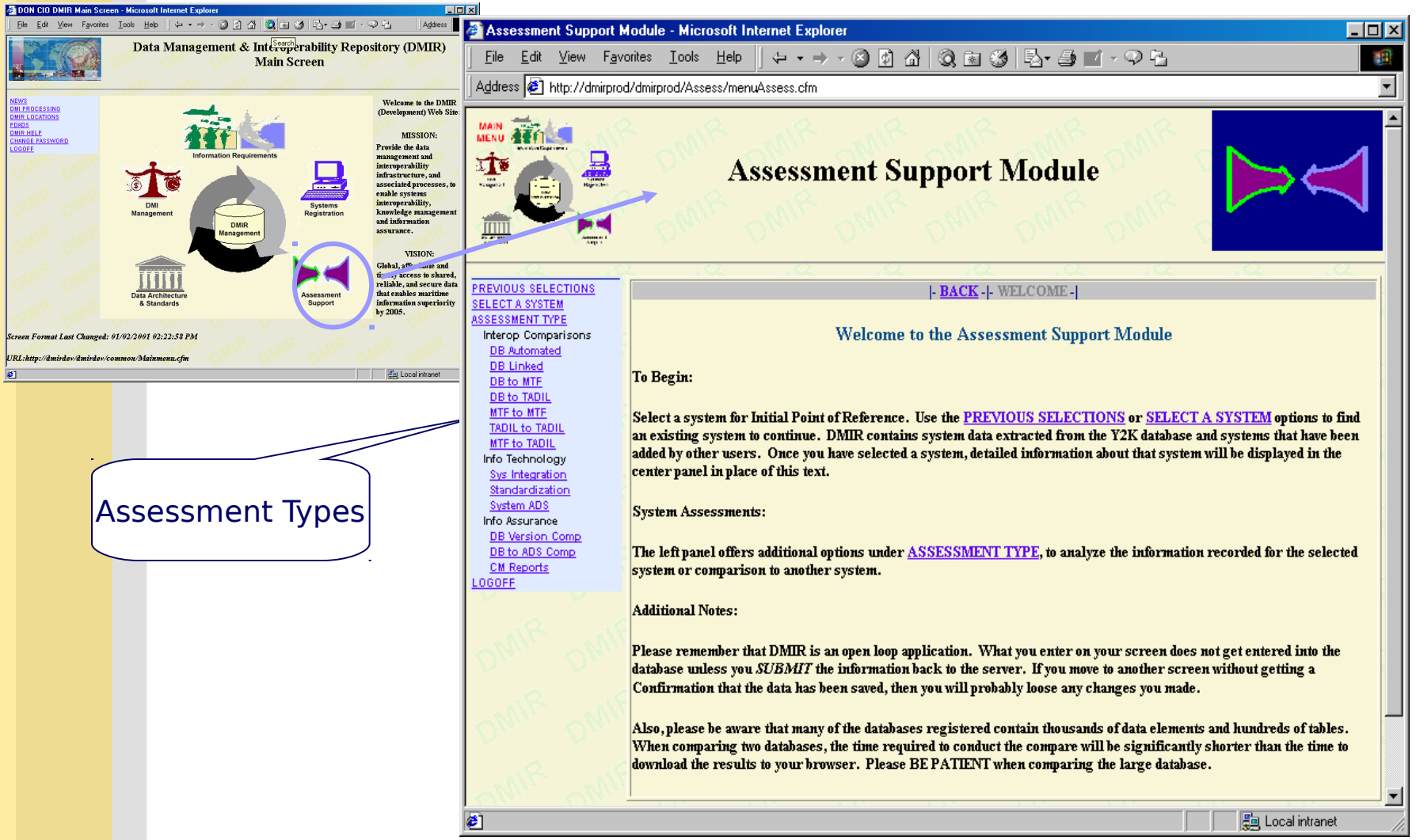
Search Table or Data Element By Name

List of Data Elements and Relationship

DMIR System Registration - Edit Database Metadata Data Element



DMIR Assessment Support



Assessment Types

Related Efforts

- DON Integrated Architecture Database (DIAD)
  - Information Exchange Requirements
- NMCI Applications Enterprise Action Group
  - Database consolidation
- Task Force Web
  - XML-centric architecture
- Portal Integration Office
  - Authoritative Data Sources
  - Metadata Registry

Summary

- The DON cannot afford, **from both cost and operational perspectives**, to ignore the need for more effective management of our data assets.
- Navy and Marine Corps strategic initiatives require an enterprise data management strategy to succeed.
- The Navy Logistics Community is a major functional area – we need to address your requirements!

Points of Contact

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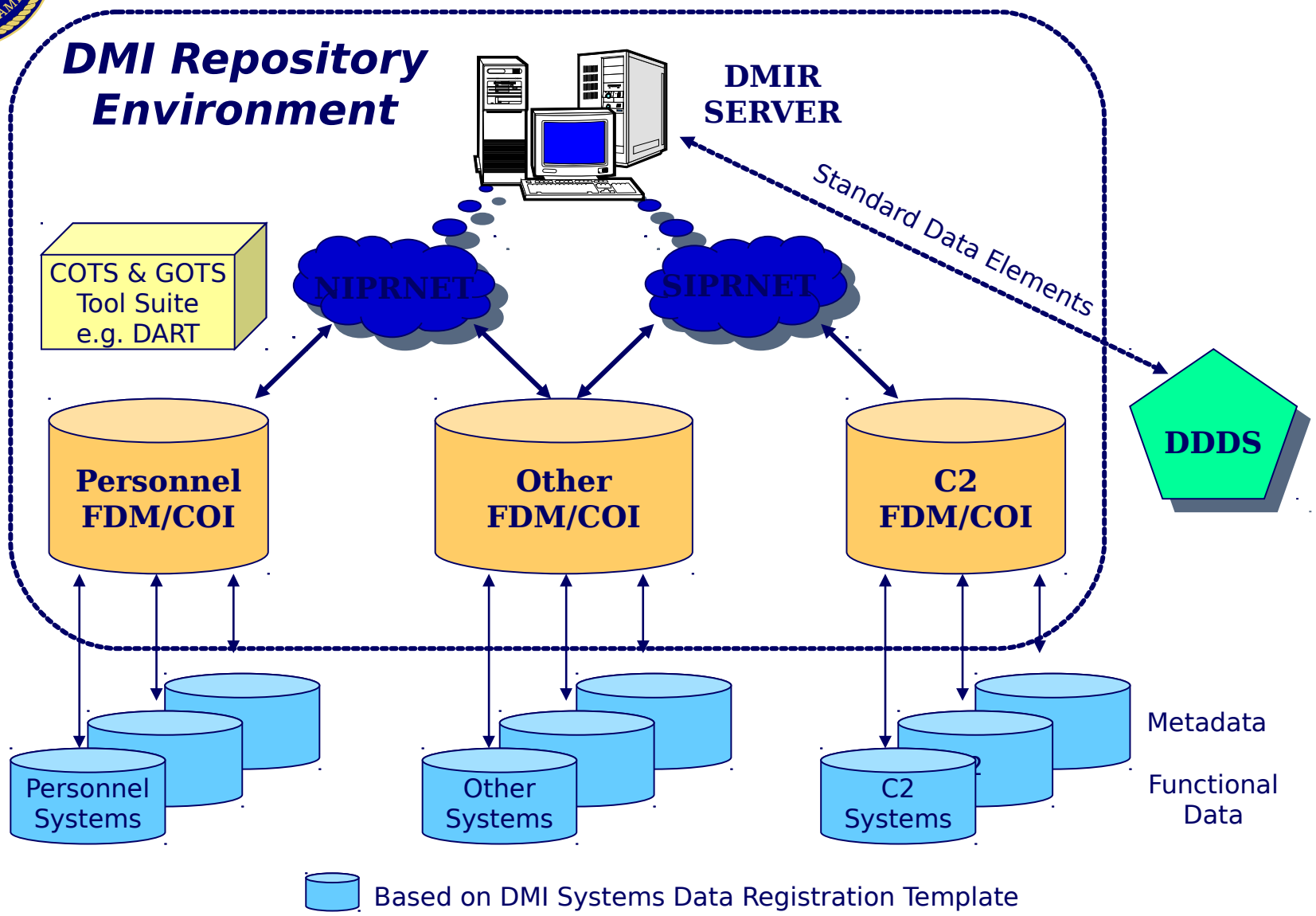
Backup Slides

DMIR CONOPS


DMI Repository Environment
DMIR SERVER
Standard Data Elements
COTS & GOTS Tool Suite e.g. DART
NIPRNET
SIPRNET
DDDS
Personnel FDM/COI
Other FDM/COI
C2 FDM/COI
Personnel Systems
Other Systems
C2 Systems
Metadata
Functional Data
Based on DMI Systems Data Registration Template

DMIR Architecture